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EXAMINER
TAYLOR, NICHOLAS R

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/763,530	CABRERA ET AL.
	Examiner	Art Unit	
	NICHOLAS TAYLOR	2141	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 January 2008</u>.

2a)☒ This action is **FINAL.**　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-40</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-40</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>23 January 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some *　c)☒ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-40 have been presented for examination and are rejected.

Response to Arguments

2.   Applicant's arguments filed January 14th, 2008, have been fully considered but they are deemed not persuasive.

3.   In the remarks, applicant argued in substance that:

(A) The prior art of Schuba does not teach that the rule identification is being performed subsequent to receiving the data structure. For example, in paragraphs 0070-0075 the "Rule Cruncher" teaches a technique for resolving rule conflicts at the time the rules are received and not at the time a data structure for processing is received. Similarly, Schuba does not teach that resolving the plurality of rules is done subsequent to evaluating the list of rules. Schuba discloses only situations in which the rules are prioritized before any data structure is received.

As to point (A), Schuba teaches a rule-based data structure dispatch system that resolves conflicts between competing network traffic rules (see abstract). Schuba uses a "Rule Cruncher," *inter alia*, when determining which rule to resolve in the case of a conflict (paragraphs 0070-0075). The rule cruncher acts to resolve the conflicts by

"assigning policy-based priorities" (paragraph 0072). The Rule Cruncher and other

components of Schuba therefore act to evaluate a list of rules to identify a plurality of

rules that apply to the dispatch of a data structure and resolve the rules to identify a

prevailing rule.

      Applicant has asserted that the Rule Cruncher is limited to resolving rule conflicts

at the time the rules are received and prior to the receipt of the applicable data

structure, because the disclosure of Schuba only describes a situation in which the rules

are prioritized before any data structure is received. The Examiner respectfully

disagrees. The Rule Cruncher described in Schuba evaluates rules based on a variety

of different situations and conditions. As shown in the Flow Manager 402 of fig. 5,

inputs are received from Environmental Agents, Application Agents, Network Services,

and direct Administrator Input, which subsequently resolve to the Rule Cruncher (see

fig. 5 and paragraphs 0064-0069). The Environmental Agent, for example, may provide

information on "current network traffic, which may…indicate that a denial of service

attack is taking place" or trigger the Rule Cruncher "depending on the time of day"

(paragraph 0052). Other sources that may trigger the Rule Cruncher include application

communication messages or a customer payment related to a current network flow

(paragraph 0053). Thus, Schuba describes rule evaluation and resolution method that

occurs prior to, concurrent with, and subsequent to accessing a data structure that is to

be processed.

(B) The prior art of Schuba fails to teach that the resolution of the plurality of rules results in a single prevailing rule. Instead, Schuba teaches that the list of rules will be prioritized and then applied in a particular order. Schuba does not teach that resolving the plurality of rules will always result in a single rule.

As to point (B), Applicant's amended claim language describes "resolving the plurality of rules to identify a single prevailing rule that will be applied for the dispatch of the data structure." Schuba teaches resolving a plurality of rules to identify a single prevailing rule that will be applied for dispatching a data structure (paragraphs 0070-0087).

Applicant asserts that Schuba teaches away from the identification of a prevailing rule due to the use of prioritization in determining a prevailing rule. However, Applicant's own claims teach the use of prioritization as a technique for resolving the prevailing rule (e.g., see dependent claim 3). Rule prioritization selects a single prevailing rule when one rule is set as having the highest priority beyond the other processed rules. Drawing on the illustrative graph example in Schuba's Summary section, if every rule vertex in a graph had a directed edge (priority resolution) onto a single rule vertex, that vertex would be identified as the single prevailing rule. While Schuba's invention may contain situations where multiple rules resolve, teaching more than is claimed does not prevent Schuba disclosing the claimed limitations.

Claim Objections

4.   Claim 28 is objected to for the use of "lit of rules." Appropriate correction is

required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-23 and 27-40 are rejected under 35 U.S.C. 102(e) as being anticipated

by Schuba et al. (U.S. PGPub 2004/0177139).

7.   As per claims 1, 28, 37, and 38, Schuba teaches a computing system that is

capable of dispatching data structures for processing by groups of one or more

methods, a method for the computing system to perform deterministic rule-based

dispatch of the data structure to a group of one or more methods for further processing,

the dispatch being deterministic despite the existence of multiple rules that conflict

regarding where the data structure should be dispatched, the method comprising the

following: (Schuba, paragraphs 0043-0045 and fig. 4)

an act of accessing a data structure that is to be processed; (Schuba, e.g.,

paragraphs 0058 and 0059 and the input of fig. 5)

subsequent to the act of accessing the data structure, an act of evaluating a list

of rules to identify a plurality of rules that apply to the dispatch of the data structure,

each of the plurality of rules specifying a different group of one or more methods to

which the data structure should be dispatched; (Schuba, paragraphs 0070-0075)

subsequent to the act of evaluating the list of rules, an act of resolving the

plurality of rules to identify a single prevailing rule that will be applied for the dispatch of

the data structure; and (Schuba, e.g., prevailing rule identification of paragraphs 0072-

0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184)

an act of dispatching the data structure to the group of one or more methods

specified by the single prevailing rule (Schuba, paragraphs 0078-0087).

8.   As per claims 2, 32, and 39, Schuba teaches the system further wherein the data

structure is a message, and wherein the act of accessing a data structure comprises an

act of receiving the message over a network (Schuba, paragraphs 0058-0059).

9.   As per claims 3 and 33, Schuba teaches the system further wherein the act of

resolving the plurality of rules to identify a prevailing rule comprises the following: an act

of applying a first prioritization mechanism (Schuba, see prioritization of paragraphs

0072-0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184).

10.   As per claim 4, Schuba teaches the system further wherein the first prioritization

mechanism is selected from the group consisting of: an express dominance

mechanism, a prioritization level mechanism, and a unique identifier comparison

mechanism (Schuba, specifically the mechanisms present in paragraphs 0072-0075,

0078-0084, 0095-0100, 0117, and 0118).

11.   As per claims 5 and 34, Schuba teaches the system further wherein the

application of the first prioritization mechanism narrows the plurality of rules to the single

prevailing rule (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs

0095-0100 and overview in paragraphs 0182-0184).

12.   As per claim 6, Schuba teaches the system further wherein the application of the

first prioritization mechanism guarantees that only one rule will prevail under any

circumstances from the plurality of rules (Schuba, see prioritization of paragraphs 0072-

0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184).

13.   As per claim 7, Schuba teaches the system further wherein the act of resolving

the plurality of rules to identify a prevailing rule further comprises the following: an act of

determining that the application of the first prioritization mechanism still resulted in more

than one rule; and in response, an act of applying a second prioritization mechanism

(Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100 and

overview in paragraphs 0182-0184, where later rules are added and additional
prioritization mechanisms are applied).

14.   As per claim 8, Schuba teaches the system further wherein the second
prioritization mechanism is selected from the group consisting of: an express
dominance mechanism, a prioritization level mechanism, and a unique identifier
comparison mechanism (Schuba, specifically the mechanisms present in paragraphs
0072-0075, 0078-0084, 0095-0100, 0117, and 0118).

15.   As per claim 9, Schuba teaches the system further wherein the application of the
second prioritization mechanism narrows the plurality of rules to the single prevailing
rule (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100
and overview in paragraphs 0182-0184, where later rules are added and additional
prioritization mechanisms are applied).

16.   As per claim 10, Schuba teaches the system further wherein the application of
the second prioritization mechanism guarantees that only one rule will prevail under any
circumstances from the plurality of rules (Schuba, see prioritization of paragraphs 0072-
0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184, where later
rules are added and additional prioritization mechanisms are applied).

17.   As per claim 11, Schuba teaches the system further wherein the act of resolving

the plurality of rules to identify a prevailing rule further comprises the following: an act of

determining that the application of the second prioritization mechanism still resulted in

more than one rule; and in response, an act of applying a third prioritization mechanism

(Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100 and

overview in paragraphs 0182-0184, where later rules are added and additional

prioritization mechanisms are applied during third and subsequent iterations).

18.   As per claim 12, Schuba teaches the system further wherein the third

prioritization mechanism is selected from the group consisting of: an express

dominance mechanism, a prioritization level mechanism, and a unique identifier

comparison mechanism (Schuba, specifically the mechanisms present in paragraphs

0072-0075, 0078-0084, 0095-0100, 0117, and 0118).

19.   As per claim 13, Schuba teaches the system further wherein the application of

the third prioritization mechanism narrows the plurality of rules to the single prevailing

rule (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100

and overview in paragraphs 0182-0184, where later rules are added and additional

prioritization mechanisms are applied).

20.   As per claim 14, Schuba teaches the system further wherein the application of

the third prioritization mechanism guarantees that only one rule will prevail under any

circumstances from the plurality of rules (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184, where later rules are added and additional prioritization mechanisms are applied).

21.   As per claim 15, Schuba teaches the system further wherein application of the third prioritization mechanism does not narrow the plurality of rules to the prevailing rule, the method further comprising the following: an act of continuing application of prioritization rules until the plurality of rules is narrowed down to just the single prevailing rule (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184, where later rules are added and additional prioritization mechanisms are applied during third and subsequent iterations).

22.   As per claim 16, Schuba teaches the system further wherein the group of one or more methods comprises a single method (Schuba, e.g., see the methods and processing of paragraphs 0078-0085).

23.   As per claim 17, Schuba teaches the system further wherein the group of one or more methods comprises a temporally-ordered chain of a plurality of methods (Schuba, e.g., see the methods and processing of paragraphs 0078-0085).

24.   As per claim 18, Scuba teaches the system further wherein the data structure is a first data structure, the plurality of rules is a first plurality of rules, the prevailing rule is

a first prevailing rule, and the group of one or more method is a first group of one or more methods, the method further comprising the following: an act of accessing a second data structure that is to be processed; (Schuba, e.g., paragraphs 0058 and 0059 and the input of fig. 5)

subsequent to the act of accessing a second data structure, an act of evaluating the list of rules to identify a second plurality of rules that apply to the dispatch of the second data structure, each of the second plurality of rules specifying a different group of one or more methods to which the data structure should be dispatched; (Schuba, paragraphs 0070-0075)

subsequent to the act of evaluating the list of rules, an act of resolving the second plurality of rules to identify a single second prevailing rule that will be applied for the dispatch of the second data structure; and (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100 and overview in paragraphs 0182-0184)

an act of dispatching the second data structure to the second group of one or more methods specified by the single second prevailing rule (Schuba, paragraphs 0078-0087, in subsequent iterations).

25.   As per claim 19, Schuba teaches the system further wherein the single first prevailing rule is the same as the single second prevailing rule such that the first group of one or more methods is the same as the second group of one or more methods (Schuba, e.g., see the methods and processing of paragraphs 0078-0085, which include overlapping groups).

26.   As per claim 20, Schuba teaches the system further wherein the single first prevailing rule is different than the single second prevailing rule and the first group of one or more methods is different than the second group of one or more methods (Schuba, e.g., see the methods and processing of paragraphs 0078-0085).

27.   As per claim 21, Schuba teaches the system further wherein one or more methods in the first group of one or more methods are also in the second group of one or more methods (Schuba, e.g., see the methods and processing of paragraphs 0078-0085, which include overlapping groups).

28.   As per claim 22, Schuba teaches the system further wherein the group of one or more methods are executed by the computing system (Schuba, e.g., paragraphs 0041 and 0042).

29.   As per claim 23, Schuba teaches the system further wherein the computing system is a first computing system, the group of one or more methods being executed by a second computing system that the first computing system is capable of communicating with over a network, the act of dispatching the data structure to the group of one or more methods comprising the following:

an act of sending the data structure to the second computing system over the network (Schuba, e.g., see the methods and processing of paragraphs 0078-0085; see also the rule generating sources 416 and 417 of fig. 4).

30.   As per claims 27 and 36, Schuba teaches the system further comprising: an act of accessing an instruction to amend the list of rules; and an act of automatically amending the list of rules in response to the instruction (Schuba, paragraphs 0054-0056).

31.   As per claim 29, Schuba teaches the system further wherein the one or more computer-readable storage media comprise physical storage memory media (Schuba, e.g., paragraph 0042).

32.   As per claim 30, Schuba teaches the system further wherein the physical memory storage media comprises persistent memory (Schuba, e.g., paragraph 0042).

33.   As per claim 31, Schuba teaches the system further wherein the physical memory storage media comprises system memory (Schuba, e.g., paragraph 0042).

34.   As per claim 35, Schuba teaches the system further wherein application of the first prioritization mechanism does not narrow the plurality of rules to the prevailing rule, the method further comprising the following: an act of continuing application of

prioritization rules until the plurality of rules is narrowed down to just the prevailing rule

(Schuba, see prioritization of paragraphs 0072-0075; see paragraphs 0095-0100 and

overview in paragraphs 0182-0184).

35.   As per claim 40, Schuba teaches a computing system comprising the following:

one or more processors; system memory; one or more computer-readable

storage media having stored thereon a list of rules, each rules specifying a condition

and a group of one or more methods that a data structure should be dispatched to if the

condition is met, the one or more computer-readable storage media further having

stored thereon computer-executable instructions that, when executed by the one or

more processors, causes the computing system to instantiate in the system memory the

following: (Schuba, paragraphs 0043-0045 and fig. 4)

a comparison module configured to access a data structure and evaluate the list

of rules to identify a plurality of rules that apply to the dispatch of the data structure;

(Schuba, e.g., paragraphs 0058 and 0059 and the input of fig. 5)

a plurality of prioritization mechanisms configured to identify which conflicting

rules take priority, at least one of the prioritization mechanisms guarantying only one

prevailing rule; a resolution module configured to use the plurality of prioritization

mechanisms to identify the prevailing rule that will be applied for the dispatch of the data

structure; and (Schuba, see prioritization of paragraphs 0072-0075; see paragraphs

0095-0100 and overview in paragraphs 0182-0184)

a dispatching mechanism configured to dispatch the data structure to the group

of one or more methods specified by the one prevailing rule (Schuba, paragraphs 0078-

0087).

Claim Rejections - 35 USC § 103

36.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

37.   Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Schuba et al. (U.S. PGPub 2004/0177139) and Kuznetsov et al. (U.S. PGPub

2006/0265689).

38.   As per claim 24, Schuba teaches the above, yet fails to teach wherein the data

structure is a Simple Object Access Protocol (SOAP) envelope.

Kuznetsov teaches the use of Simple Object Access Protocol envelopes (e.g.,

paragraph 0155) and XPATH rule-based statements (paragraphs 0028-0030) in a

network rule processing system (paragraph 0056).

It would have been obvious to one of ordinary skill in the art, at the time the

invention was made, to have combined Schuba and Kuznetsov to provide the network

system of Kuznetsov in the system of Schuba, because doing so would allow efficient

XML markup processing compatibility in a network rules system and widen the system

format capabilities (e.g., see Kuznetsov paragraphs 0021-0023 and 0025).

39.   As per claim 25, Schuba-Kuznetsov teaches the system further wherein the list

or rules is expressed using XPATH statements (Kuznetsov, paragraphs 0028-0030).

40.   As per claim 26, Schuba teaches the above, yet fails to teach wherein the list or

rules is expressed using XPATH statements.

Kuznetsov teaches the use of Simple Object Access Protocol envelopes (e.g.,

paragraph 0155) and XPATH rule-based statements (paragraphs 0028-0030) in a

network rule processing system (paragraph 0056).

It would have been obvious to one of ordinary skill in the art, at the time the

invention was made, to have combined Schuba and Kuznetsov to provide the network

system of Kuznetsov in the system of Schuba, because doing so would allow efficient

XML markup processing compatibility in a network rules system and widen the system

format capabilities (e.g., see Kuznetsov paragraphs 0021-0023 and 0025).

Conclusion

41.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm, with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/NT/
Nicholas Taylor
Examiner
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/Jason D Cardone/
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